

WHAT IS CLAIMED IS:

1. A method of performing a colon exam, said method comprising:  
  
obtaining at least two initial Computed Tomography (CT) datasets;  
  
extracting colon automatically from the CT datasets;  
  
synthesizing views of the extracted colon;  
  
displaying a plurality of obtained and synthesized views of the colon simultaneously; and  
  
synchronizing the views.
2. A method in accordance with Claim 1 wherein obtaining at least two initial CT datasets comprises obtaining 3-dimensional (3D) CT datasets in both prone and supine orientations.
3. A method in accordance with Claim 1 wherein extracting a colon comprises generating a 3D view of the colon.
4. A method in accordance with Claim 3 wherein extracting a colon further comprises:  
  
extracting the colon a first time;  
  
displaying the colon extracted the first time;  
  
receiving a redefined intermediary point from a user; and  
  
extracting the colon a second time using the received redefined intermediary point.
5. A method in accordance with Claim 3 wherein extracting a colon further comprises:

extracting the colon a first time;

displaying the colon extracted the first time;

receiving a recalibrated center path of the colon from a user, in both the prone orientation and the supine orientation; and

extracting the colon a second time using the received recalibrated center.

6. A method in accordance with Claim 1 wherein synthesizing views of the extracted colon comprises performing a 3D to 2D mapping to generate a 360-degrees unfolded view of an inner wall of the colon.

7. A method in accordance with Claim 1 wherein displaying obtained and synthesized views of the colon simultaneously comprises displaying both a prone view and a supine view of a colon.

8. A method in accordance with Claim 1 wherein displaying obtained and synthesized views of the colon simultaneously comprises:

displaying a 3D view of the extracted colon;

displaying a 2D prone dissection view and a 2D supine dissection view of the colon; and

displaying an endoscopic view and an axial view of the colon.

9. A method in accordance with Claim 1 wherein displaying obtained and synthesized views of the colon simultaneously comprises:

displaying a plurality of views and orientations of the colon a first time;

receiving at least one modification to at least one display layout preference from a user; and

displaying a plurality of views and orientations a second time using the received modification.

10. A computer readable medium encoded with a program configured to instruct a computer to:

obtain at least two initial Computed Tomography (CT) datasets;

extract colon automatically from the CT datasets;

synthesize the views of the extracted colon;

display the obtained and synthesized views simultaneously; and

synchronize the views.

11. A computer readable medium in accordance with Claim 10 wherein said program further configured to instruct the computer to obtain at least two initial CT datasets comprising 3-dimensional (3D) CT datasets in both prone and supine orientations.

12. A computer readable medium in accordance with Claim 10 wherein said program further configured to instruct the computer to generate a 3D view of the colon.

13. A computer readable medium in accordance with Claim 11 wherein said program further configured to instruct the computer to:

extract the colon a first time;

display the colon extracted the first time;

receive a redefined intermediary point from a user; and

extract the colon a second time using the received redefined intermediary point.

14. A computer readable medium in accordance with Claim 11 wherein said program further configured to instruct the computer to:

extract the colon a first time;

display the colon extracted the first time;

receive a recalibrated center path of the colon from a user, in both the prone view and the supine view; and

extract the colon a second time using the received recalibrated center.

15. A computer readable medium in accordance with Claim 10 wherein said program configured to synthesize views of the extracted colon comprises performing a 3D to 2D mapping to generate a 360-degrees unfolded view of an inner wall of the colon.

16. A computer readable medium in accordance with Claim 10 wherein said program further configured to instruct the computer to:

display a 3D view of the extracted colon;

display a 2D prone dissection view and a 2D supine dissection view of the colon; and

display an endoscopic view and an axial view of the colon.

17. A computer readable medium in accordance with Claim 10 wherein said program further configured to instruct the computer to:

display a plurality of views and orientations of the colon a first time;

receive at least one modification to at least one display layout preference from a user; and

display a plurality of views and orientations a second time using the received modifications.

18. A Computed Tomography (CT) System comprising:

a radiation source;

a radiation detector; and

a computer coupled to said radiation source and said radiation detector, said computer configured to:

obtain at least two initial Computed Tomography (CT) datasets;

extract colon automatically from the CT datasets;

synthesize the views of the extracted colon;

display the obtained and synthesized views simultaneously; and

synchronize the views.

19. A system in accordance with Claim 18 wherein said computer further configured to obtain at least two initial CT datasets comprising 3-dimensional (3D) CT datasets in both prone and supine orientations.

20. A system in accordance with Claim 18 wherein said computer configured to extract a colon comprises generating a 3D view of the colon.

21. A system in accordance with Claim 20 wherein said computer further configured to:

extract the colon a first time;

display the colon extracted the first time;

receive a redefined intermediary point from a user; and

extract the colon a second time using the received redefined intermediary point.

22. A system in accordance with Claim 20 wherein said computer further configured to:

extract the colon a first time;

display the colon extracted the first time;

receive a recalibrated center path of the colon from a user, in both the prone view and the supine view; and

extract the colon a second time using the received recalibrated center.

23. A system in accordance with Claim 18 wherein said computer configured to synthesize views of the extracted colon comprises performing a 3D to 2D mapping to generate a 360-degrees unfolded view of an inner wall of the colon.

24. A method of performing a colon exam, said method comprising:

obtaining at least two initial Computed Tomography (CT) datasets;

extracting colon automatically from the CT datasets;

generating a 3D view of the colon; and

synthesizing views of the extracted colon.

25. A method in accordance with Claim 24 wherein synthesizing views of the extracted colon comprises performing a 3D to 2D mapping to generate a 360-degrees unfolded view of an inner wall of the colon.